ABSTRACT OF THE DISCLOSURE

In a synchronous digital communications system a network of SDH (or SONET) equipments (SE) are arranged to exchange synchronisation signals via ports on the SEs, each port being allocated a source identifier (SID). These SIDs are used to identify the source of each synchronisation signal input at a particular SE. When the SE selects a synchronisation signal to transmit out of its ports, the SID associated with that selected signal is compared with the SID of each port. If a match is found the synchronisation status message (SSM) associated with the synchronisation signal sent out at that port is set to "Do Not Use" (DNU) to warn the destination SE that the synchronisation signal has been looped back. Each SE is allocated a unique equipment identifier. The SID of each port is set to the unique SE identifier of the SE to which it is directly connected.